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THE FOREST SERVICE IN ALASKA

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CONTENTS

Page

INTRODUCTION..... 1

FOREST RESEARCH IN ALASKA: PAST, PRESENT, FUTURE..... 2
- Research at Juneau
- Research at Fairbanks

ALASKA NATIVE CLAIMS SETTLEMENT ACT..... 4

STATE AND PRIVATE FORESTRY..... 5

LAND MANAGEMENT PLANNING..... 8
- Area guides
- Forest land management plans
- Roadless area review and evaluation
- Interdisciplinary teams
- Socioeconomic study
- Alaska planning team

RECREATION..... 10
- Recreation use patterns
- Wilderness and other special classifications
- Cultural resources
- Visual resources

FISHERIES AND WILDLIFE..... 13
- Research and studies
- Effects of logging
- Habitat improvement
- Cooperation with other agencies
- Stream management
- Threatened and endangered species
- Aquaculture

TIMBER MANAGEMENT..... 17
- Reforestation and sale area improvement program
- Stream protection
- Timber sale administration
- Allowable timber harvest levels
- Long-term and independent timber sale program

SOIL AND WATER..... 22

LAND USES..... 24

MINERALS..... 26

TRANSPORTATION SYSTEM..... 27

HUMAN RESOURCE PROGRAMS..... 29
- Youth Conservation Corps
- Young Adult Conservation Corps
- Other information
- Other human resource programs

ADMINISTRATIVE SUPPORT..... 32

BALANCE SHEET OF THE ALASKA REGION..... 33

THE FOREST SERVICE IN ALASKA

INTRODUCTION

This booklet is a summary of the significant activities of the Forest Service in Alaska. It also presents the most pressing issues and problems with which the Forest Service is involved.

Many agencies, organizations, and individuals express continued concern for the conflicts that may exist between developmental activities on the national forests--mainly timber harvest, road construction, and mining--and other important resource values, such as fisheries, wildlife, scenic values, and wilderness. The Forest Service recognizes the potential for conflict and shares these concerns. The challenge of multiple use management is to develop techniques for minimizing or resolving conflicts between a variety of uses so the public may enjoy the greatest overall benefits from the national forests.

At the same time, many significant activities have been underway and merit attention, even though they have not been controversial. It is worthwhile to look at the problems so that positive aspects may be preserved and the problem areas corrected.

The emphasis on the Resources Planning Act and land management planning has been designed to create close cooperation between local, State, and Federal Governments and all concerned segments of the public. Completing the Tongass Land Management Plan, for example, is certainly an important key to resolving some conflicts and being more responsive to the people of southeast Alaska. Detailed land management planning is ongoing on the Chugach National Forest and likewise demands the participation of all segments of the public and Government.

Because good plans are valuable only when they are implemented on the ground, staffing has been substantially increased for both the planning and administration of logging and road construction activities. The U.S. Department of Agriculture recognizes the need for still more increases in staffing and expects to provide these increases. As a result, major changes in on-the-ground practices have taken place in recent years. Examples are cutting unit size limitations, restrictions on logging steep slopes, and guides for stream protection. An interdisciplinary team (IDT) approach is used to guide the project work and implement new requirements. All on-the-ground activities of a potentially sensitive nature are undertaken within the constraints of guidelines and recommendations developed by IDTs. The IDT process is defined in detail in the Southeast Alaska Area Guide, and training sessions have been conducted throughout the Region.

In Alaska, as is the case nationwide, a critical issue is the amount of wilderness the national forest lands should provide. Through the land management planning process, the Alaska Region is developing alternative recommendations for allocating lands to

immediate wilderness, wilderness study, special management areas, or to multiple use management other than as wilderness.

The Alaska Region is placing major emphasis on providing employment opportunities through an expanded Youth Conservation Corps (YCC). About 160 Alaskan youths are employed under the YCC program, and 943 young people work under the National Young Adult Conservation Corps (NYACC). Activities under these programs provide needed conservation improvements as well as training and providing jobs for young Alaskans.

The Alaska Native Claims Settlement Act (ANCSA) and the Alaska Statehood Act are effecting a major shift in landownership in Alaska from Federal to State and private ownership. This shift is still taking place. But, a result of it has been the rapidly expanding role of the Forest Service and the State Forester's office in providing technical forest land management assistance to the new private landowners, mainly the Native corporations.

FOREST RESEARCH IN ALASKA: PAST, PRESENT, FUTURE

For several decades, research in the coastal and interior forests of Alaska has been conducted by Forest Service scientists at the Juneau and Fairbanks laboratories of the Pacific Northwest Forest and Range Experiment Station. The administrative headquarters of the station is in Portland, Oregon.

Research At Juneau

Scientists at Juneau began studies of Alaska's coastal forests in 1924. The focus of this early research was on timber yields, forest nutrition, and methods of refortestation following clearcutting. These studies continued into the midthirties and then tapered off with little further research until 1948. By 1948 large-scale timber harvests and new pulp mills were proposed for Alaska. These presented new problems and needs for information based on research. The Juneau scientists expanded their program to meet these needs. Emphasis was placed on studies of problems created by allowing natural reforestation after large-scale clearcutting and on the effects of such logging on aquatic habitats critical to chum and pink salmon.

In the midsixties, research was broadened to include ecological studies of hydrology and soil stability. In 1972, the program at Juneau was reorganized to provide a more multidisciplinary approach to the various studies. Through this reorganization, the scientists gained more integrated working relationships that served to coordinate their disciplines. By this time in the history of the laboratory, the scientists and their support technicians represented the disciplines of wildlife and fisheries biology, forest pathology, forest entomology, forest mensuration, silviculture, and ecology.

Research on silviculture and timber management is continuing at Juneau with increasing emphasis being placed on studies of important wildlife and fish species and their habitat needs. The ability of the forest ecosystem to supply these needs is being studied under natural conditions and under situations imposed by various management systems. Timber management studies emphasize finding methods to increase timber production on selected sites, through thinning and other treatments, and to apply silvicultural systems that integrate management objectives.

Research At Fairbanks

Scientists at Fairbanks began studies of Alaska's interior forests, or taiga, in 1957. The focus of this early research was centered on studying the reproduction of forest tree species, successional trends of interior forests, and the effects of fire on

hydrology and nutrient cycling. These basic studies are continuing. The work at Fairbanks involves five principal research areas with from 5 to 15 individual studies being carried out in each area.

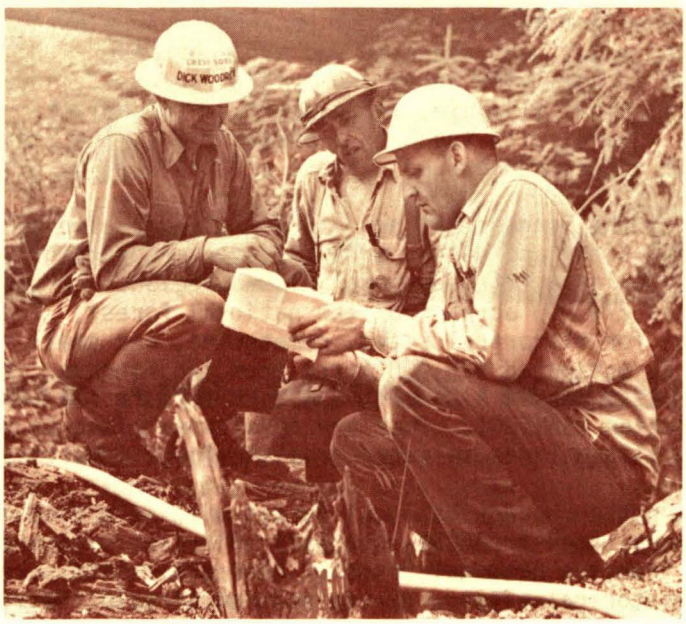
Classifying vegetation--Environmental and forest successional characteristics are being integrated in a classification system for the major types of vegetation in interior Alaska. These studies will eventually provide a sound hierarchical classification system for the types of vegetation in the interior.

Fire behavior--The results of the fire behavior study and the effects of fire on taiga and tundra communities will be applied to fire management. This research also provides information that will be used to develop guidelines for prescribed burning, to predict conditions that follow wildfires, and to develop models that will give information on the types of fuels which may be expected from various kinds of interior vegetation.

Regenerating vegetation--Strategies are being developed for regenerating and growing trees and shrubs in interior Alaska. Within a few years, as a result of these studies, guidelines will be developed for regenerating white spruce on flood plains and hillsides. Guidelines will also be developed for obtaining natural harwdwood regeneration; recommending spacing between trees in thinning stands of birch, white spruce, and black spruce; and managing the regeneration of vegetation.

Insects and disease--Forest insects and disease are being studied to determine their effects on the regeneration of trees and shrubs on the taiga. From this research, guidelines will be developed for indirectly controlling insects, managing spruce beetle attacks, and managing hardwoods and forage that have been defoliated by insects and disease.

Erosion--This research at Fairbanks involves studies of the relationships of precipitation, runoff, and stream sedimentation in major vegetation types in undisturbed and managed conditions. From this research, guidelines will be developed so that resource managers can reduce erosion caused by timber harvest in the subarctic. Guidelines will also be developed to help determine precipitation and runoff relationships on watersheds in several types of land use areas. Finally, the research will provide a review of existing knowledge about watershed management which will be incorporated in comprehensive guidelines for managing Alaska's interior forests.



ALASKA NATIVE LAND CLAIMS SETTLEMENT ACT

The landownership pattern for Alaska, including the national forests in Region 10, is undergoing monumental change. In coming years, the Alaska Native Claims Settlement Act (ANCSA) will bring about ownership changes through Native land selections and Section 17d(2) land designations, in addition to State of Alaska land selections, and it will significantly affect national forest management in Alaska for many years. This demands good land adjustment planning and implementation. Native selections alone will remove nearly a million acres from national forest lands. Very high resource values in recreation, wildlife, and timber will be affected. The Forest Service (FS) will be working with the Native corporations, the State, Bureau of Land Management (BLM), and others on land adjustment proposals.

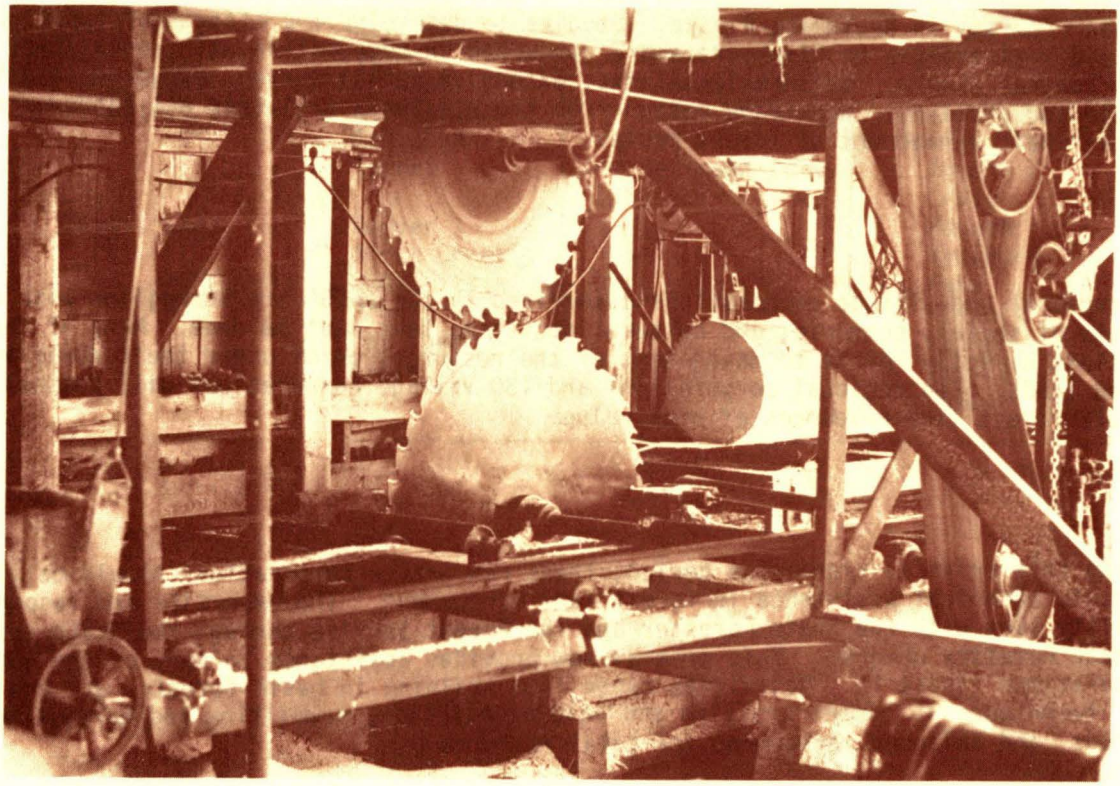
Each Native village on the Tongass National Forest will receive 23,040 acres of national forest land. Sitka and Juneau urban Native corporations each will also receive 23,040 acres. Sealaska, the southeast Alaska regional corporation, is eligable to select an estimated 279,000 acres from the national forest. These selections, along with selections for historical sites, cemeteries, and small isolated Native groups, will remove an estimated 525,000 acres from the Tongass. Most of the village Native corporations of southeast Alaska have joined to form the Southeast Alaska Native Timber Corporation (SANTCO). They are developing plans to jointly manage the timber resources of village lands selected from the Tongass National Forest.

Each Native village on the Chugach National Forest will select 69,120 acres of land. In addition to villages named in ANCSA, the City of Kodiak will also select one township, 23,040 acres, from the national forest. Also subject to selection by Alaska Natives are Native historical sites, cemeteries, and certain individual residence sites.

If all corporations on the Chugach are determined to be eligible under the ANCSA, some 454,000 acres of the Chugach National Forest would be conveyed to Native ownership.

The period between passage of the act and final conveyance of selected land is a challenging one to both the Native corporations and the Forest Service. Although ANCSA provides the authority for continued management of the national forests by the Forest Service before conveyance to the Natives, it also provides for "maximum participation by the Natives in decisions affecting their rights and property." The corporations, in their efforts to protect the present and future interests of the stockholders, can legitimately question past management decisions made by the Forest Service and current efforts to fulfill contractual obligations.

Certainly, problems will continue to arise until land title conveyances are complete. Thus, we are committed to support and assist Native corporations in their land claims and to encourage conveyances as rapidly as possible.



STATE AND PRIVATE FORESTRY

At the time of statehood late in the fifties, more than 90 percent of Alaska land was under Federal ownership. Significant changes have taken place since that time. ANCSA provided that more than 40 million acres of Federal land in Alaska will be conveyed in fee title to Native corporations. The Alaska Statehood Act of 1958 set aside 104 million acres of Federal land for selection by the State before 1984. As of June 1977, about 35 million acres of State lands were yet to be selected.

Alaska's land base is 365 million acres. Implementing the Statehood Act and ANCSA will establish 104 million acres under State ownership and 44 million acres under private ownership. More than 140 million acres in Alaska are classified as forested land. Of this, the State has already selected 28 million acres, and Native lands are expected to include more than 17 million acres of forested lands.

The State of Alaska is gradually assuming fire prevention and protection responsibilities for large areas formerly protected by the BLM. Federal assistance to the State for developing adequate forest fire protection capability is made available through Forest Service administration of its Cooperative Forest Fire Control program for non-Federal lands.

Forest insect and disease detection surveys and impact evaluations are expanding to meet the demand for increased information. A hemlock dwarf mistletoe management program is underway in southeast Alaska. Studies to determine the effects of spruce beetles and leaf rollers on birch trees are conducted in cooperation with researchers in south-central Alaska. In interior Alaska, extensive aerial surveys are made to detect insects and diseases. Knowledge gained from these efforts will help all landowners improve their management of forest pests.

The regional and village corporations authorized by the ANCSA are struggling with a variety of social, economic, and cultural decisions that must be made. Many of these decisions directly relate to management of the resources on or under their newly acquired lands. Ten regional corporations and 130 village corporations will possess renewable forest land resources of high value.

During this critical transition period, these new Native corporations should be given adequate technical assistance in forest land management. The expertise and responsibility lies with the State Forester and the Forest Service through the State and Private Forestry program. This program now provides assistance to many of the Native corporations (table 1). Activities range from training in basic forestry and engineering techniques to timber cruising and sale preparation, sawmilling and harvesting methods, and balanced management for total resource use.

Much of the most valuable timber land to be acquired by Native corporations lies within the Tongass National Forest. Here, a timber management venture among the southeast Alaska Native villages and the Sealaska Regional Corporation will involve nearly 500,000 acres of timber land. The annual timber harvest from these lands could offer an economic development opportunity to overcome critical unemployment problems now prevalent in many rural communities. Forest Service and State assistance will be a positive factor in developing these and other opportunities throughout Alaska.

Table 1 --Native corporations

Regional corporation	Village corporation
Ahtna, Inc.	Copper Center
	Gakona
	Gulkana
Bristol Bay Native Corp.	Aleknagik
	Dillingham
	Egegik
	Levelock
	New Stuyahok
	Nondalton
	Portage Creek
Chugach Natives, Inc.	English Bay
	Port Graham
	Tatitlek
	Chenega
	Eyak
Cook Inlet Region, Inc.	Eklutna
	Ninilchik
	Seldovia
	Tyonek
Doyon, Ltd.	Beaver
	Birch Creek
	Chalkyitsik
	Circle
	Dot Lake
	Eagle
Doyon, Ltd.--cont.	Fort Yukon
	Galena
	Huslia
	Koyukuk
	McGrath
	Nenana
	Shageluk
	Stevens Village
	Tanacross
	Tanana
	Healy Lake
Koniak, Inc.	Larsen Bay
	Ouzinkie
	Port Lions
	Afognak
Nana Regional Corporations, Inc.	Kotzebue
Sealaska Corp.	Angoon
	Craig
	Hoonah
	Hydaburg
	Kake
	Klawock
	Saxman
	Yakutat
	Kasaan

LAND MANAGEMENT PLANNING

Forest Service activities are directed through legislation and planning. The legislative direction is mainly national in scope, and the planning direction extends from the national level to the local level.

The two principal acts that now direct Forest Service planning activities are the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) and the National Forest Management Act of 1976 (NFMA). The planning system used in the Alaska Region is hierarchial in nature. It contains four different planning levels, each of which deals with different aspects of the total decisionmaking process.

Direction level--The directional planning level defines *how* Forest Service responsibilities, legislative mandates, and other binding actions are to effected. The products of this level are the Forest Service Manual System, the National RPA Program, area guides, and cooperative agreements among different agencies of Government. The scope of this level covers all national forest lands and other rangelands and forests included in the planning areas of the Nation.

Land allocation level--The land allocation level complies with directional level decisions to define *where* combinations of land use opportunities will be made available. Products of the allocation level are land management plans with associated environmental impact statements and forest-wide resource plans. The scope of this level encompasses whole units of the National Forest System.

Prescriptive level--This level defines *how* management activities and uses that are associated with planned allocations are to be coordinated and controlled. The products of this level are prescriptive plans for specific management areas which direct

implementation of planning programs and related environmental analysis reports. The scope of this level is limited to specific areas within the boundaries of a national forest.

Implementation level--The implementation level guides the use of land according to allocation intents and prescriptions. The products of this level are project plans with environmental analysis reports, contracts, and permits. The scope of this level is restricted to sites and routes within specific areas on national forests.

In proceeding from the directional level to the implementation level, the scope of each narrows. The effective lives of the products become increasingly shorter, and the kinds of decisions that are contained in the products become more and more localized and precise. The data needed at each level also vary, ranging from comprehensive and general at the upper levels to situational and precise at the lower levels.

Each level plays a distinctive but strongly interrelated role in the decisionmaking process that results in Forest Service management actions on the ground.

Area Guides

The Southeast Alaska Area Guide, distributed to the public in April 1978, is an example of a directional level planning product. This 280-page document contains sections on land management issues, planning direction, land management policies, and the RPA. This same document includes a draft environmental impact statement on the proposed resource allocation direction for the Tongass through the time period that will be required to complete a forest-wide land management plan. The guide is the product of a truly participatory approach to planning. A successful public involvement program and a partnership approach to State involvement underpin the contents of this document. A similar guide is being developed for south-central Alaska.

Forest Land Management Plans

At the land allocation level, six interagency task forces are now active in amassing an information base to use in developing a land management plan for the Tongass. The plan will define how each of the approximately 800 discrete watersheds that comprise the forest are to be managed. It will specify where four different kinds of land use designations are to be applied in resolving management issues and satisfying different needs and demands. The plan is scheduled for completion by December 1978.

Public involvement will be completed in the same spirit and intensity as in the guide development phase. The University of Alaska will participate in the planning effort.

A land management plan was developed for the Chugach National Forest in 1974. This plan is being revised and refined to meet requirements of both the RPA and the NFMA.

Roadless Area Review And Evaluation

A roadless area review and evaluation process formed several proposals for solving roadless area issues in Alaska. These proposals were released in a national draft environmental statement with State supplements in June 1978. A heavy reliance on public involvement was used to help to resolve the roadless issues.

Interdisciplinary Teams

At the prescriptive planning level, the regional office staff unit for planning initiated a series of interdisciplinary team (IDT) training sessions for the management areas. A hypothetical management problem was designed to actively involve participants in IDT functions. Work is continuing to prescribe for and implement current management programs.

Socioeconomic Study

Although much of the collected information concerns the physical resources of the forests, human concerns are paramount in any effective planning process. To gain a better understanding of the relationship of the forests to the people, a cooperative agreement for a 2-year period involving the socioeconomic issues was made with the University of Alaska. Under this agreement, the University will participate in the development of the socioeconomic elements of the planning process, as well as complete an assessment of the demand for wilderness in southeastern Alaska.

RECREATION

Outdoor recreation and esthetic values on national forest lands in Alaska comprise a blend of resources and moods unmatched elsewhere. These lands have been described as relatively undeveloped, sparsely populated, water oriented, scenic, rugged, and isolated. They impart a feeling of vastness, wilderness, and freedom to the individual. These are the features the Forest Service wants to emphasize in its management of a recreation program in Alaska.

Dispersed recreation, including hunting, fishing, camping, boating, and beachcombing, accounts for 75 percent of all recreational use in the national forests in Alaska. The program under the Forest and Rangeland Renewable Resources Act (RPA) specifies an increase in dispersed recreation. Alaska can contribute substantially to dispersed recreation, especially in experiences not well represented elsewhere.

Recreational Use Patterns

The Alaska Region is unique for its system of public recreation cabins which are rented to the public by the Forest Service on a reservation basis. The system includes 187 cabins located in picturesque settings throughout the Tongass and Chugach National Forests. Because travelers greatly in Alaska depend on small aircraft or boats for access, the recreation cabins double as a safety feature in the event of poor flying or boating conditions or for protection from bears.

On the Kenai Peninsula part of the Chugach National Forest, an extensive system of trails--all with road access--links most of the recreation cabins. For areas accessible by road on the two forests, conventional recreational facilities are provided, including 16 campgrounds, 27 picnic areas, and 7 lodges or resorts operated by private interests under permit. The visitor center at Mendenhall Glacier north of Juneau attracts local residents as well as tourists from the many cruiseships plying the "Inside Passage." A similar visitor center is planned for Portage Glacier south of Anchorage. All of these facilities, including the recreation cabins, are greatly used.

Wilderness and Other Special Classifications

The Forest Service in Alaska has taken many actions over the years to recognize and protect the outstanding natural features occurring on national forest lands. The following areas have been given a special classification to assure this recognition and protection.

--Mendenhall Glacier Recreation Area, established in 1947 (5,660 acres).
--Ward Lake Recreation Area, established in 1948 (160 acres).
--Limestone Inlet Natural Area, established in 1951 (6,439 acres).
--Old Tom Natural Area, established in 1951 (4,727 acres).
--Pack Creek Natural Area, established in 1951 (5,800 acres).
--Walker Cove-Rudyerd Bay Scenic Area, established in 1952 (93,540 acres).
--Tracy Arm-Ford's Terror Scenic Area (283,000 acres). This was originally proposed by the Forest Service for classification as a wilderness area in 1954. During the hearings, there was strong opposition to this classification and the proposal was set aside. In 1960, the Secretary of Agriculture classified it as a scenic area.
--Cape Fanshaw Natural Area, established in 1965 (600 acres).
--Admiralty Lakes Recreation Area, established in 1965 (11,000 acres).
--New Eddystone Rock Geological Area, established in 1966 (1 acre).
--New Kasaan Totem Park Archeological Area, established in 1966 (11 acres).
--Fish Creek Recreation Area, established in 1972 (8,710 acres).
--Dog Island Natural Area, established in 1976 (744 acres).

In addition to those classified areas, the Forest Service in its earlier roadless area review (completed in 1973 with one addition in 1976) identified seven wilderness study areas totaling 2,600,000 acres. Table 2 summarizes a few significant statistics about them.

Table 2 --Wilderness study area data

Study areas	Total area	National forest land	Commercial forest land	Timber volume
	----------Acres----------			MM bm
Nellie Juan	704,000	530,000	26,000	615.0
Russell Fiord	227,000	227,000	3,000	60.0
Tracy Arm 1/	900,000	780,000	38,000	1,155.8
Petersburg Creek	24,000	24,000	13,000	400.0
King Salmon Capes	120,000	119,000	51,000	1,274.5
Granite Fiords 2/	591,400	590,000	55,300	1,712.0
Khaz Bay	33,000	33,000	2,400	60.0
Total	2,599,400	2,303,000	189,600	5,277.3

1/ USGS minerals survey completed a report in summer 1977.
2/ USGS minerals survey published a report in 1977.

The Forest Service is a participant in the Ecological Reserves Program. Forty-six areas on national forest lands have been recommended to date. The existing six natural areas will be incorporated in the Ecological Reserves Program.

As a part of the roadless area review and land management planning process, the Alaska Region is identifying those additional lands which are to be recommended for wilderness, wilderness study, and special classifications, as well as lands which should be managed for resources other than wilderness. A key issue centers on what existing manmade features and uses will be allowed in wilderness. Airplane access, motorboat use, and cabins are the most important types of uses on which decisions must be made. Proposals for permitted uses and features of wilderness areas are being discussed at public workshops conducted by the Forest Service throughout southeast and south-central Alaska as part of the land management planning process.

Cultural Resources

About 500 inventoried archeological and historic sites are in southeast Alaska. They range in age from 10,000 B.C. to the World War II era. They include Native villages, camps, and cemeteries; historic caucasian remains, such as Russian period settlements; canneries and salteries; mines and prospects; and many homesteads and fox farms.

Most of these are on land administered by the Tongass National Forest area offices. As timber harvesting and other ground-disturbing activities increase on the Tongass, the chances for the discovery of new historic or archeological sites will increase. And, the chances for their destruction or disturbance will grow.

The value of these cultural resources, the danger of their destruction, and Forest Service legal obligations to enforce Federal laws prompted the Alaska Region to hire its first archeologist in 1974. Since then, needs for archeological surveys have increased, and additional special staff have been hired to fully comply with Federal antiquities legislation and the RPA deadline of 1990.

Visual Resources

The scenic resource on national forests in Alaska is one of the most important assets. So, it is being managed as a separate resource in a manner similar to timber, wildlife, and recreational resources. A visual resource program has been planned using landscape architects to help inventory, evaluate, and set visual quality objectives (in addition to other resource objectives) for all areas of national forest land. Visual quality objectives are based on an inventory and evaluation of public use and scenic quality. On-the-ground project site plans and implementation is done in a way to meet those visual quality objectives.

FISHERIES AND WILDLIFE

The first Forest Service wildlife biologist was hired in Alaska in 1960 and another was added in 1961. Today, there are 32 biologists in the region, not including research biologists. Additional biologists may be recruited to assist with expanded land management planning and related field administrative work.

The work of the biologists consists of participation in land management planning, fish and wildlife-timber management coordination, and habitat improvement. They also work closely with biologists of the Alaska Department of Fish and Game (ADF&G) and other agencies to assure coordination of the respective responsibilities of these organizations in the national forest areas.

Research And Studies

Administrative studies are being conducted by Forest Service biologists in cooperation with research scientists and research projects by scientists from other State and Federal agencies. These studies are closely related to fisheries and wildlife habitat management. They include--

- A complete inventory of fish habitat, in cooperation with ADF&G, is continuing on the Tongass. An inventory of needed stream improvement projects is being done for each area.

- The National Marine Fisheries Service (NMFS), cooperating with the Forest Service, has completed a survey and inventory of deactiviated log transfer sites on part of the Tongass National Forest to determine persistence of bark accumulation and its effects on estuarine life. This work is continuing on additional sites.

- On the Copper River Delta, the University of Alaska is conducting a study of the breeding ecology of the dusky Canada goose. The University of Minnesota is studying the changes in the habitat and vegetation composition resulting from the 1964 earthquake.

- The inventory of bird species and habitat for the Alexander Archipelago is continuing with emphasis on nongame species.

- A preliminary survey identifying critical deer winter range by soil ecosystem type was completed by biologists and soil scientists of ADF&G and Forest Service on the Chatham and Stikine Areas of the Tongass. Results of this study will help provide guidance for design of clearcut shape and size to increase browse production.

- In the Stikine Waterfowl Management Area, several studies and an intensive habitat inventory are in progress. A contract report by the University of Washington botany team studying vegetative succession has been prepared. A soils analysis of the flats has been completed, two studies have been initiated on moose browse utilization in the delta, and analysis of waterfowl use is continuing.

  The Quartz Creek-Kenai Prescribed Burn Administrative Study, begun in cooperation with ADF&G, is continuing to analyze fire techniques, study the effects of fire on Kenai Peninsula vegetative types, and evaluate the techniques to improve moose habitat.

Effects Of Logging

Although a potential for serious adverse effects from logging exists for fisheries, wildlife, and watershed values, there is little evidence that significant damage has actually taken place. In the few instances of apparent damage, the probable cause appears to be from a violation of timber sale contract requirements.

There also may have been adverse effects of logging in small tributary streams used by coho salmon and steelhead, cutthroat, and Dolly Varden trout. Only recently has the importance of these streams for rearing species of fish been recognized. Protective measures are now prescribed. Proper size, shape, and installation of culverts in road construction is essential to passage of fish, and a strong program has been developed to correct existing installations where necessary and to assure proper installation in the future.

Although quantitative evidence of significant damage because of logging is lacking, qualitative evidence shows that damage can be caused by sedimentation, changes in the temperature regimens of streams, and other human caused occurrences. With a good

knowledge of the habitat requirements of salmonid fishes, land management planning can now include sound prescriptions for protecting the fishery resource.

Few definitive studies of the effects of logging on the wildlife resource (other than fisheries) have been conducted in the Alaska Region. Because deer survival depends on critical winter range, special provisions are being made to identify and protect this range. Studies are also underway to determine the needs of mountain goats during the winter and whether timber harvest practices in goat country need to be modified. Timber harvest does not appear to significantly affect either brown or black bears. Studies are needed to determine the effects on species of birds and mammals that are obligate users of old growth timber.

Habitat Improvement

The fish habitat improvement program was initiated in 1962. Since that time, more than 200 projects have been completed on the Chugach and Tongass National Forests. The Forest Service and ADF&G have almost equally split the costs.

Wildlife habitat improvement is receiving more emphasis. Prescribed burning is being conducted on the Kenai Peninsula to increase forage for moose.

Stream improvement and rehabilitation projects include beaver dam removal, fishway construction, fish planting, pothole blasting, and stream clearance through log jams, blowdown, and debris removal. Most of the projects are intended to protect and enhance habitat for the populations of the five salmon species that provide significant economic and social benefits to the State, but they also reflect a growing demand for quality sport fisheries.

Cooperation With Other Agencies

Many cooperative efforts are carried on in Alaska between the Forest Service and other agencies. There is a master Memorandum of Understanding with the ADF&G. There are other cooperative agreements with ADF&G, NMFS, Fish and Wildlife Service, BLM, and other agencies.

The Sikes Act provides an excellent opportunity for cooperative wildlife projects between the Forest Service and the State of Alaska. A cooperative wildlife habitat management plan was prepared in 1976 by the Forest Service and the ADF&G. This plan identified a high priority program that will be implemented as rapidly as funding is available. In developing this program, it was possible to illustrate the extremely high benefit/cost ratio that would be realized from many of the project proposals. The comprehensive plan is being updated.

The Copper River Delta Wildlife Management Area was created by a Cooperative Agreement, signed April 5, 1962, by the Forest Service, ADF&G, and the Alaska Department of Natural Resources (ADNR). The management objectives of the game management unit is to maintain the habitat in its present quality and condition and to enhance the habitat where needed.

The Portage Wildlife Habitat Management Area (Chugach) is under the cooperative management of the Forest Service, BLM, ADF&G, ADNR, Alaska Department of Highways, and the Alaska Railroad. It was designated in 1976.

Stream Management

Removing vegetative canopy from some streams, especially the smaller ones, can result in increased stream temperatures during the summer. This is especially true in the southern part of the Tongass. Therefore, guidelines prescribe cutting patterns around

these streams to protect them against undue temperature increases. Excessive amounts of linbs, bark, and needles in stream channels also can adversely affect the spawning and rearing habitat of salmonid fishes. Present guidelines are meant to keep debris out of streams or to immediately remove debris from the streams.

Forest Service practice favors tailoring the prescription to the specific site with each stream to be examined for its own needs. The Southeast Alaska Area Guide contains a detailed description of fish and wildlife management issues, goals, and policies.

Threatened And Endangered Species

The Forest Service is cooperating with the Fish and Wildlife Service in Aleutian Canada goose studies by providing Forest Service personnel with descriptions and photographs of the birds and by encouraging increased field observations.

Throughout the region, emphasis continues to be placed on critical habitat and species identification. Region 10 is revising its unique species inventory to include the Vancouver Canada goose, Peale's peregrine falcon, trumpeter swan, and wolverine. Bald eagle nest surveys are continuing. A threatened and endangered plant program has been initiated in the region.

Aquaculture

Forest Service fisheries biologists are increasingly involved in surveys and in preparing environmental statements for proposed salmon aquaculture facilities. Forest Service personnel have been involved in interagency aquaculture workshops, public hearings on proposed sites, and familiarization tours of existing facilities.

The identification of aquaculture sites is an important part of the current land management planning process. Where State, Federal, and private aquaculture organizations note promising opportunities for permanent aquaculture developments, the sites will be designated and provisions taken to encourage development of the better sites.

TIMBER MANAGEMENT

Coordinating a timber management program with management of other equally important resource values is certainly one of the most challenging of the Forest Service responsibilities in Alaska. In addition to the importance of the timber resource to the general economy, there is a good opportunity to use the timber program to actually enhance other values. At the same time, it must be recognized that a potential exists for conflict with and damage to other resources, unless great care is practiced. The problems and issues are complex and important, and much of the effort of Forest Service and other agency specialists is devoted to coping with them.

Reforestation And Sale Area Improvement Program

In coastal Alaska, logging is generally followed by an abundance of Sitka spruce and western hemlock regeneration. But, in some areas and under some site conditions, natural regeneration does not occur rapidly enough to obtain satisfactory stocking within a 5-year period. It may be necessary to plant these areas to meet National Forest Management Act requirements for establishing regeneration stands.

Timber has been harvested from about 300,000 acres in the national forests in Alaska. Results of the 1976 stocking survey indicated a backlog of 8,400 acres not adequately stocked. An additional small percentage of area needing reforestation will occur from current harvesting on an annual basis.

The region is planning to establish a forest tree nursery near Petersburg. It is to be a greenhouse complex capable of growing a million containerized seedlings each year on a one-crop-per-year basis. The initial phase, planned for 1979, will produce 150,000

seedlings. Full production is expected by 1981. Our current plans are to obtain all trees needed for the Chugach from the State nursery near Palmer, Alaska.

The overabundance of natural regeneration that occurs on most harvested areas can benefit from early thinnings. This will benefit wildlife habitat and increase harvestable timber growth.

The precommercial thinning program was started in 1974 with 244 acres under contract. By 1977, this had increased to 2,168 acres. The areas that could presently benefit the most from this thinning are the areas harvested 10 to 20 years ago. We anticipate building to a program of 15,000 to 20,000 acres annually.

Hemlock dwarf mistletoe is prevalent in the hemlock component of the timber stands in southeast Alaska. British Columbia estimates an annual loss of 150 million cubic feet of wood to this parasite through increased mortality and decreased growth of infected trees. Since western hemlock comprises about 75 percent of old-growth stands and a slightly smaller percentage of young-growth stands, control of dwarf mistletoe is an important factor in timber management. A control program was started in 1967. Since that time, 13,500 acres have been treated in the Tongass National Forest. This parasite does not exist on the Chugach National Forest.

Stream Protection

Commercial fishing and timber harvesting are both very important to the economy in southeast Alaska, and use of these resources are in some cases difficult to coordinate. Timber sale cutting units and road systems must be designed to protect the streams. Improperly conducted timber harvest can adversely affect stream water temperatures. Clearcutting adds to the amount of nutrients available in the soil. It also increases the amount of rainfall that reaches the ground where the runnoff can carry the nutrients to the streams. Studies show that only moderate amounts of nutrients are added to the streams by timber harvest in Alaska. This leaching is lessened here, because the rapid regrowth after logging quickly increases the rainfall interception and water use by plants. The added nutrients that do reach the streams may be beneficial in Alaska, as nutrient levels in many southeast Alaska streams are quite low under natural conditions. The added nutrients can have an adverse effect on the fisheries habitat if they cause an excess production of algae in the stream.

The Southeast Alaska Area Guide provides detailed stream protection requirements, and these are being implemented. A comprehensive examination is underway in southeast Alaska to survey and, where necessary, to correct unsatisfactory culvert and bridge installations that may be impeding the passage of fish in streams.

Timber Sale Administration

The timber sale contract is in instrument for implementing resource coordination requirements. Supervising the activities related to timber harvest is the responsibility of the Resource Management Assistants (RMAs). There are about 40 RMAs and Sale Administrators working in timber sale administration. In addition, about 30 engineers and engineering technicians supervise the construction of the roads need for this harvest.

About 50 timber harvesting operations take place on the Tongass and Chugach National Forests during the summer. The frequency of sale adimistration visits to a sale depends on the size and complexity of the operation and the timing of critical phases, such as bridge construction over a salmon stream. Sale administrators and engineering personnel work on some sales full time, but other sales are administered by periodic inspections.

Since the turn of the century, about 300,000 acres have been clearcut on the national forests in Alaska. About 250,000 acres of this total have been harvested since construction of the first major pulpmill in the fifties. This was harvested from about 1.5 percent of the area in the national forests. Timber harvest in recent years includes the area shown in table 4.

Table 4 --Area of timber harvested

Fiscal year	Area harvested
	Acres
1973	19,700
1974	18,300
1975	13,800
1976	16,500
1977	14,500

The statement has frequently been made that the Forest Service plans to cut 98 percent of the commercial timber on the Tongass National Forest. This has never been the intention of the Forest Service. The land management planning process will determine how much of the commercial forest acreage will be harvested. Based on the ranges for potential yield established in the Southeast Alaska Area Guide, about 4 million acres of the Tongass could provide a timber crop in addition to other resource values. This is about a quarter of the total Tongass acreage and only two-thirds of the commercial forest land. These figures will become more precise as actual land allocations are made in later stages of the planning process.

Not all of the estimated 4 million acres would be logged during a normal 100-year rotation period. A substantial part would receive a modified harvesting treatment (other than standard clearcutting practices) because of special considerations needed to accomodate other resource values. In many cases, this would include a considerable lengthening of the normal 100-year rotation. Our best estimate, pending further refinement of planning and data, is that timber harvest of some kind will take place on about 2,300,000 acres of the Tongass during a 100-year period. On the Chugach, we would expect to harvest timber from about 200,000 acres in such a rotation period.

For resource protection, some of the potential timber yield will come either from stands that require more sophisticated logging techniques than are currently in common use in Alaska or from areas that are now marginally economical to harvest. Improved economics and increased wood fiber demand could make "marginally economical" timber attractive to log, even with conventional logging equipment. A satisfactory economic climate and the increased use of these new logging systems, such as helicopter, balloon, and other full suspension systems, are necessary if the projected yield is to be realized.

Long-Term And Independent Timber Sale Program

Four long-term sales have been awarded on the Tongass to bring economic development and stability to southeast Alaska. These are the 1951 Ketchikan Pulp Company (KPC) sale, now owned by Louisiana-Pacific, Ketchikan Division (LPK); the 1954 Pacific Northern Timber Scale (PNT), which expires in December 1981; the 1957 Alaska Lumber and Pulp Company Sale (ALP); and the 1968 Juneau Unit Sale, which was never operated and was cancelled by mutual agreement between the purchaser, Champion-International, and the Forest Service in June 1976. The two 50-year sales (LPK and ALP) were validated by the National Forest Management Act of 1976.

The design for timber harvest for these sales is based on five-year operating periods. For each period, the timber sale contract is examined and the value of the included timber is appraised so that current conditions, including new environmental and utilization requirements, can be met. Additionally, the National Forest Management Act specifically provides that at the time of the five-year rate redetermination on the two 50-year sales, we are to revise the contracts to conform to requirements of the Resources Planning Act of 1974, as amended by the National Forest Management Act of 1976. The independent sale program will offer about 245 MM bm for sale in fiscal year 1978.

Timber sold from the national forests must be sold for not less than the appraised value. The Forest Service establishes the fair market value, based on the costs, returns, and profit margins of the average operator. The Alaska Region uses an accountant-forester team to collect cost data from the timber sales. (See the section "Balance sheet of the Alaska Region" for information about timber sale receipts for national forest products and about equity increases.)

Communities with a great dependence on the timber industry include Haines, Kake, Ketchikan, Klawock, Metlakatla, Petersburg, Sitka, and Wrangell. Currently, about 5,300 jobs, in both the public and private sectors, are directly or indirectly related to the timber products industry in southeast Alaska. Timber industry related jobs make up about 29 percent of southeast Alaska's employment.

During the last 20 years, the number of small timber businesses operating in southeast Alaska has steadily declined. Both small and large businesses believe the advertised stumpage rates are too high, and small businesses have expressed concern about their inability to sell pulp logs and chips to local pulpmills.

The Regional Forester, after public hearings, took the following actions in 1977 to help small businesses develop a viable economy:

- The Regional Forester and the Small Business Administration signed a share agreement which annually will set aside approximately 80 MM bm of timber on the Tongass National Forest and 5 MM bm on the Chugach for purchase by small businesses. The fiscal year 1978 set aside program is 120 MM bm.

- The Regional Forester recommended that Secretary's regulation CFR 221.5(c) be changed, allowing the export of chips made from sawlogs on all sales other than the 50-year pulp sales. The regulation was changed.

- The Forest Service will appraise some sales using chip and cant selling values.

Specialists in other disciplines, such as soil scientists, fisheries biologists, and others, are available to help with sale administration when their expertise is needed. Additional funding and manpower needs for on-the-ground management have been recognized at the Department level, and steps are being taken to provide this assistance.

Allowable Timber Harvest Levels

The allowable timber harvest level on the Alaska National Forests depends on several variables. These include the productivity of the forest, current logging technology, such practices as fertilization and thinning, and the interrelationship with other forest resources and the environment.

The total potential yield, adjusted for anticipated Native and State land selections, is being calculated on the basis of the Tongass Land Management planning process. The potential timber yield for the next 10-year period will depend on the management alternative selected for the Tongass National Forest. The selected alternative will be presented in the final environmental statement for the Tongass Land Management Plan, which is scheduled for release in December 1978.

The timber industry in southeast Alaska has said that present manufacturing facilities are geared to handle about 660 million feet board measure (MM bm) a year. No definite figures are available on the Chugach because of a lesser demand than on national forest land. Table 3 shows the amount of timber released for harvest in recent years on the long-term sales or advertised for sale as part of the independent sale program, as well as the volumes of timber actually harvested in recent years.

Table 3 --Offered and actual amounts of timber harvested

Fiscal year	Volume made available	Volume harvested
	MM bm	
1973	395	593
1974	430	561
1975	710	469
1976	555	449
1977	555	465
1978	557 (Planned amount)	

SOIL AND WATER

The soil and water program is designed to support management activities and land management planning. Soil and water resources are especially critical in that any degradation of their quality will generally adversely affect all other resources.

Soil scientists and hydrologists are actively involved in nearly every interdisciplinary team effort affecting land use planning and project activities. Typical projects include timber sale layouts, road locations, stream crossings, culvert and bridge designs, aquaculture facilities, and erosion control measures.

A two-part soil and water quality monitoring program was started to determine compliance with State water quality standards and to evaluate effects of land management activities on soil and water resources. Long-term "base" stations have been established on selected watersheds not intended for management activities for at least 15 years; "project" stations have been established on selected watersheds proposed for timber harvest within the next 3 years. Several of these stations are being operated in cooperation with the U.S. Geological Survey.

The Forest Service is developing new management guides for watershed protection. Emphasis is being placed on slideprone slopes, unstable stream systems, rock and gravel quarries, erosion control, and fish streams. The guides are being developed to aid the resource management assistants in making sound management decisions and to help them recognize when soil scientists or hydrologists need to be consulted.

A cooperative effort of several agencies in Alaska is underway to determine criteria for establishing instream flow needs. But, at present, no other watershed research is

being conducted on national forest lands in Alaska. Research needs include studies of volcanic ash stability, V-notch drainages, soil site deterioration and forest regeneration related to logging, mineral sediment and erosion rates, precipitation amounts-tupes-patterns, land management effects on streamflow regimens, soil moisture fluxes, and stream channel development.

LAND USES

Land occupancy involves the appropriation, designation, classification, and use of national forest land for public or private purposes. Included are public recreational areas, resorts, recreational residences, winter sports sites, and other related uses which are considered part of the recreational resource. Other land occupancies involve many public and private nonrecreational uses, such as power developments, roads, airfields, residences, and industrial sites. These occupancies are generally authorized through one of a variety of special use permits, easements, or licenses issued to private, local, or State agencies and through memoranda of understanding or permits to other Federal agencies.

Future land occupancy demands are expected to exceed demands in the past. These demands will be greatest along the expanding transportation system and, in some cases, will conflict with demands for other resource uses.

Land occupancies under special use permits involve several public and private uses. Private and semiprivate recreational uses consist mainly of summer homes and organization camps. Examples of public uses, other than for recreation, are communication sites, dams, powerlines, and gravel pits. Many private nonrecreational uses are for year-round residences and for storage facilities. Most summer homes are located in groups, but a few isolated ones still exist. Year-round residence permits were issued in the past to assist in development of communities where no private land existed for such purposes. With land selection opportunities now afforded the State under the Statehood Act, the need no longer exists for further expansion of the year-round residence program. And, new permits are no longer being issued.

Homesteading of national forest lands suitable for agriculture was formerly permitted under the Forest Homestead Act of June 11, 1906. Lands with agricultural potential were occupied and patented early in the days of the law's existence. Because of a lack of additional suitable land, the 1906 law was repealed on October 23, 1962. Consequently, there is now no authorization for homesteading on national forest land.

Before the Alaska Statehood Act, where a need existed near communities or settlements, the Forest Service could issue homesite permits. At that time, homesite permittees could acquire fee title to the lot. Under the Alaska Statehood Act, Alaska was authorized to select as much as 400,000 acres from national forest lands for community expansion and recreation. Now, the need for homesites is expected to be met from the lands selected by the State of Alaska and distributed to the public. State selections are to be completed by 1984. State land selections have many of the same management implications for national forest lands as do the Native selections under the Alaska Native Claims Settlement Act.

For many reasons, including the land freeze and passage of the Alaska Native Claims Settlement Act, progress toward completing the State selection program has been relatively slow to date. The State, as well as the Forest Service, is now giving it high priority. The importance of completing community selections under Section 6 of the Statehood Act was addressed in the Tongass land management guide. The State, as well as the Forest Service, has asked communities eligible to select lands from the national forest to identify their development and expansion land needs. The State Commissioner of Natural Resources and Regional Forester have met to identify and resolve conflicting interpretations of the act and to remove historical barriers in the selection and grant process.

MINERALS

Prospecting and mining played a major role in the settlement and development of Alaska. After the discovery of large lode gold deposits at Juneau and Douglas in 1882, prospecting activity increased. Copper was discovered in the Kasaan and Mt. Jumbo areas of Prince of Wales Island. A high-grade gold mine was started on Chichagof Island. Gypsum was found at Iyoken Cove on Chichagof Island; large iron deposits at Snettisham, Union Bay, and Klukwan; and immense deposits of limestone on islands west of Prince of Wales Island.

The only mine operating at present in southeast Alaska is a barite mine in Duncan Canal just west of Petersburg. Present prospecting indicates that a large deposit of nickel-copper ore is on Yakobi Island as well as an extremely large deposit of molybdenite ore on the mainland east of Ketchikan. Smaller deposits of these minerals as well as uranium, nickel, tungsten, lead and zinc are known to exist elsewhere in the region. Additionally, large areas of the Tongass National Forest have potential for petroleum and gas production. All national forest lands, unless withdrawn, are subject to entry and mining under the General Mining Law of 1872, as amended. Secretary of Agriculture regulations protecting surface values during mining activities on national forest lands are also administered by the Forest Service.

Japan and the west coast of the United States appear to be the logical volume markets for Alaskan ores and concentrates. The ability of Alaskan minerals to compete in these markets is affected by high costs of mining operations, particularly high labor costs.

Development of the mineral resources of the region will have an increasingly important effect on the economy of communities within the national forests as well as on other resources. Many secondary effects that are social and economic in nature will affect national forest management. Offshore oil development cannot be accomplished without onshore support facilities which may need to be built on national forest lands.

The Forest Service recognizes the importance of oil, gas, and mineral resource development to the well-being of Alaska and the Nation. It also faces the challenge of integrating this development into the management and protection of all other resource values occurring on national forest lands in Alaska.

TRANSPORTATION SYSTEM

The Forest Service plans, designs, and constructs transportation systems to support various resource activities and provide access for management, use, and protection on national forest lands. The State of Alaska has primary responsibility for planning, project development, design, and construction of regional highways and air facilities, as delegated by the Federal Highway Administration and the Federal Aviation Administration. The main purpose of State highway systems is to provide for the movement of people and materials from one community to another, regardless of land and resource allocations along the way. The Forest Service also directs its efforts toward the development of resource-related transportation systems. Proposals for developing other major arterial highway systems may come from other sources.

Long-term transportation planning involves consecutive developments that improve a transportation system over time. The system must include a cost-effective combination of available transportation modes. Costs to be weighed include those that are social or environmental in nature as well as those that are traditionally economic. Long-term planning must be sufficiently flexible to accomodate changing community needs, changing trends in land uses and values, and rapid evolution in the technological state of the art.

The Forest Service maintains about 1,500 miles of a road system in Alaska. During calendar year 1978, about 200 miles of system and 60 miles of temporary roads will be constructed for timber access in the Tongass National Forest. Most of the mileage will be constructed by timber purchasers as part of their operations. These system

facility costs will be allowed through purchaser credits. Construction of 10 miles of timber access roads, several permanent bridges, and correction of drainage structure deficiencies will be accomplished through public works contracts during the year. All current timber sales include permanent roads as parts of the contracts. This provides the Forest Service with the needed contractual control to meet environmental concerns and resource needs.

The trail system is receiving added emphasis in the Alaska region's programs. Appoximately 350 miles of trail will be maintained throughout the region. The Chugach National Forest will reconstruct 50 miles of trail that were damaged by floodwaters. This reconstruction will also correct safety defects and raise the maintainability of the trails. The 1978 program also includes construction of several trail bridges. At the present time, the region has 350 miles of trails in need of reconstruction.

The transportation system includes other facilities, such as terminal sites, airfields, docks, and vessel-mooring structures. Unlike many other national forests, the various resources and publics cannot be adequately served solely by a land-based system. The topography and geography dictate the need for a comprehensive multimodel system.

Resource-oriented activities, such as timber management, habitat improvement, recreation, commercial fish harvesting and processing, and game and fish management, all require some sort of access. Management of timber resources may require several modes of transportation that result in extensive road networks, different log yarding systems, and a determination of which water transportation method will be most compatible with all resources. Roads now serve most of the developed recreational campgrounds and picnic areas. Visitors to remote recreation cabins gain entry mainly by floatplane, although some cabins are accessible by boat. The protected waterways and thousands of miles of shoreline also provide small boat access to literally millions of dispersed recreational opportunities. Hiking trails are most in demand near communities, although minimal trail maintenance greatly reduces their use. In some cutover areas, old logging roads may provide access to certain types of recreational activities. But, in most cases, the difficulties associated with getting vehicles to such remote road networks restrict road use to foot traffic and occasionally a trail bike.

Prospecting and the development and processing of mineral resources can necessitate development and use of various methods of transportation, including aerial trams. Currently, the development and removal of minerals is not a major activity. Recent exploratory work, however, indicates transportation facilities associated with mineral development can be expected to increase.

Transportation systems must be planned in conjunction with overall land management plans to fit all resource objectives. Land-based segments of the system are generally constructed in connection with project plans, such as individual timber sales. Their effects on other resources, economics, and future maintenance needs are considered during planning phases.

Marine corridors are well defined in Alaska. They follow fiords, straits, and passages that intersect the rugged mountains of the mainland and the large islands of the region. The scarcity of natural land transportation corridors make such corridors a valuable resource in themselves.

The Forest Service has cooperated with various State agencies in planning transportation facilities for Alaska. The State transportation agencies are conducting a "Southeastern Alaska Transportation Study." This study will coordinate planning efforts of the State agencies responsible for air, land, and water transportation facilities and services. The result will be a multimodel transportation planning process for southeast Alaska. The Forest Service, as the principal land manager in southeast

Alaska, will participate in the State's regional transportation planning process. The comprehensive plan will project overall system needs and help identify places where cooperative State/Forest Service efforts in the construction and maintenance of facilities will meet joint objectives.

The Forest Service is cooperating with the Alaska Power Administration and the Army Corps of Engineers to develop a plan for hydroelectric development. Regional corridors may be identified and used for transportation, power transmission, and communication purposes. With few exceptions, power is locally produced, and communication is by microwave transmission.

In addition to the road, air, and port facilities directly concerned with the management of forest resources, the Forest Service has a responsibility to actively participate in the planning, project development, design, and construction of regional highways, air, and port facilities to be constructed on land managed by the Forest Service. These facilities, although not primarily dedicated to land management, will serve this function to a large degree. Their effects on other resources, economics, and future maintenance must be given full consideration.

HUMAN RESOURCE PROGRAMS

Youth Conservation Corps

The Youth Conservation Corps (YCC) program began in 1970 with a pilot program on the Chugach National Forest. That year, 48 young men and women participated in the program. This year, 233 Alaskan youth will participate and live at camps at Juneau, Kake, Kenai Lake, Ketchikan, Klawock, Petersburg, and Yakutat (table 5).

The YCC program gives young people an opportunity to gain an appreciation for our natural resources by accomplishing conservation-related work projects in the national forests

and by receiving environmental awareness training. YCC is an 8-week summer program designed to--

- Accomplish meaningful conservation work on public lands.
- Provide employment opportunities for young people who are 15 to 18 years of age and from all social, economic, ethnic, and racial backgrounds.
- Help YCC participants develop an awareness and appreciation for the Nation's natural environment and heritage.

Several YCC work projects are planned for 1978. Some of these include improving wildlife and fisheries habitats, constructing trail bridges, and maintaining recreation cabins, trails, campgrounds, and picnic areas.

Table 5 --Conservation Corps data

Camp locations	Number of enrollees	Type 1/
YCC:		
Eagle River (Juneau)	38	7-day residential
Kake	10	Nonresidential
Kenai Lake	110	7-day residential
Ketchikan	20	Nonresidential
Klawock	5	Nonresidential
Petersburg	15	Nonresidential
Revillagigido (Ketchikan)	20	5-day residential
Sitka	10	Nonresidential
Yakutat	5	Nonresidential
YACC:		
Chugach National Forest	150	Residential
	34	Nonresidential
Tongass National Forest--		
Chatham Area	50	Residential
	30	Nonresidential
Ketchikan Area	97	Residential
	39	Nonresidential
Stikine Area	150	Residential

1/ In a residential camp, enrollees live at the camp for either 5 or 7 days each week. In nonresidential camps, enrollees live at home and commute to work 5 days a week.

Young Adult Conservation Corps

This year, the new Young Adult Conservation Corps (YACC) program is being implemented nationwide. In Alaska, 550 young people will find jobs through the State's Job Service Centers and be employed by the Forest Service under the YACC program (table 5).

The program provides year-round jobs for unemployed men and women who are 18 to 23 years of age and from all social, ethnic, and racial backgrounds. They perform useful conservation work and other services on Federal and non-Federal public lands and water areas.

Participants receive training for the basic skills they will need for later permanent employment. Although mainly an employment program, its other goals are to incorporate meaningful sociability training and environmental awareness activities as part of the work.

Other Information

U.S. Department of Agriculture policy does not permit discrimination because of race, color, national origin, sex, or religion. Any person who believes he or she has been discriminated against in any USDA-related activity should write to the Secretary of Agriculture, Washington, D.C. 20250.

Other Human Resource Programs

In addition to YCC and YACC, the Forest Service provides training and work opportunities in these programs:

Vocational rehabilitation program--Meaningful work experiences and vocational training are provided in nonpaid positions for handicapped persons. The Forest Service has the authority to employ severely handicapped persons.

Cooperative education--This program provides for periods of study-related employment in suitable types of work for students in 2- or 4-year colleges who are pursuing related degree curricula.

Summer aid program--Summer employment is offered to needy youth to provide meaningful work experiences for individuals 16-22 years of age who might not otherwise have the opportunity to obtain a summer job.

Volunteers program--Volunteer services help with Forest Service programs or activities which would not be accomplished by the normal work force.

Stay-in-school-program--This program is similar to the Summer Aid Program, except that work is offered throughout the year for students, ages 16-22, who need temporary employment to continue their education.

Summer employment program--Work is provided during the summer for students, ages 18 or older, attending college or needing work opportunities.

ADMINISTRATIVE SUPPORT

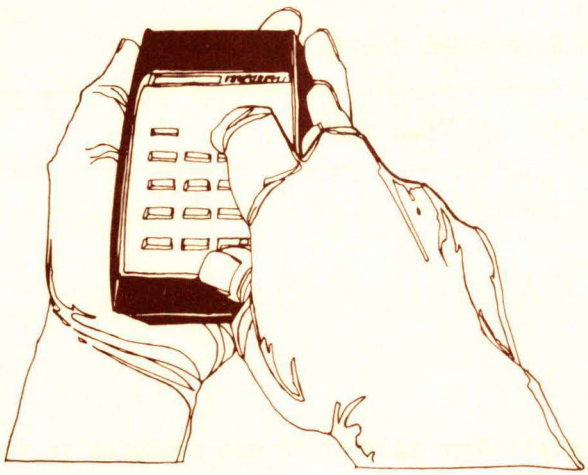
Expanding populations in Alaska and increasing activity in the various resource programs have severely taxed the region's existing support facilities, such as the radio communications system, family housing, crew housing, and warehouses. Work is underway to relieve the strains on these facilities.

The Alaska Region has the most complex radio system in the Forest Service. Because of limited commercial telephone service, often the only communications from many remote work centers come by the region's radio system. A new system was installed in 1974 to provide a direct link between field crews and their headquarters. It has greatly increased the safety of employees and the efficiency of work programs. The Alaska Region's radio system has been designated as the emergency radio system for coastal Alaska from Ketchikan to Kodiak. During and after such natural disasters as earthquakes, the region's radio system provides emergency communications to various disaster headquarters.

Housing Forest Service employees at remote locations has always been a difficult problem. With rapidly expanding work programs, and even more critical shortage of adequate housing has developed. In many areas, the ability to recruit and retain qualified employees is directly related to the availability of suitable housing. Family units are being constructed to help ease this critical shortage, as well as barracks for field crews.

The rapid increase in population in Alaska has severely affected Forest Service recreational facilities. Federal Water Pollution Control Act amendments and the Safe Drinking Water Act require extensive reconstruction of facilities to bring them into

compliance with standards set by law. New improvements, such as water and waste disposal systems, are needed at many campgrounds and at such major attractions as Portage and Mendenhall Glaciers.



Balance sheet of the Alaska Region

Congress has not mandated, nor is it public policy to expect, that the National Forest System will return to the Treasury a like amount of funds, or more than was appropriated. Table 6 shows the change in Government equity for fiscal year 1977, the most recent year for which total information is available. During 1977, total funding for the Alaska Region was $62 million, not including trust funds and manpower programs. During that period, production from the Alaska National Forests totaled $42 million.

Table 7 shows that the sale of forest products includes timber purchaser roads worth $8.7 million. Table 8 shows the total for available appropriated funds, which are used for the construction or reconstruction of buildings, roads, trails, and other improvements--plus the acquisition of nonexpendable property and current operating expenses. (The $20 million of current operating expenses are *not* included when determining net increases or decreases in Government equity.)

Table 6 --Change in Government equity in fiscal year 1977

Item	First subtotal	Second subtotal	Total
		Dollars	
Appropriations received 1/.....			62,006,688
Items produced with appropriations--			
Cash receipts.....	1,562,659		
Timber purchaser roads.....	8,658,492		
Sale of forest products 2/.....		10,221,151	
Buildings.....	1,654, 944		
Roads, trails, and bridges.....	39,902,369		
Other improvements.....	180,675		
Construction, reconstruction, or both...		41,737,988	
Nonexpendable property.....		641,855	
Total for items produced with appropriations.....			52,600,994
Net decrease in Government equity.....			9,405,694

1/ See table 8. 2/ See table 7.

Table 7 --Receipts from sale of forest products in fiscal year 1977

Item	Subtotal	Total
	Dollars	
Timber and forest products sales.....		1,538,579
Land uses for--		
Recreation.....	65,672	
Power.....	1,606	
Mineral leases and permits.....	5,779	
Other.....	19,169	
Total for land uses.....		92,226
Admission and user fees.....		13,655
Knutson-Vandenburg Act collections.....		918,199
Total net cash receipts.....		1,562,659
Timber purchaser road credits.....		8,658,492
Total received for sale of forest products..		10,221,151

Table 8 --Appropriations received in fiscal year 1977

Line no.		Appropriation 1/	Less State grants	Net appropriation
			Dollars	
702	Protection and management.....	12,737,600		12,737,600
707	Forest research.....	5,200		5,200
708	State and private forestry.....	749,500	450,000	299,500
711	Assistance to States for tree planting.....	5,800	5,800	0
712	Insect and disease control.....	221,900		221,900
714	Cooperative law enforcement.....	174,818		174,818
715	Forest roads and trails.....	11,862,870		11,862,870
726	Rural community fire protection.....	74,300	64,300	10,000
728	Construction and operation of recreation facilities.....	5,800		5,800
731	River basin study and investigations.....	12,000		12,000
733	River basin studies.....	34,000		34,000
781	Forest land management construction.....	1,752,000		1,752,000
783	Pollution abatement.....	176,000		176,000
795	Purchaser credit roads.....	34,715,000		34,715,000
	Total.....	62,526,788	520,100	62,006,688

1/ Appropriations do not include trust funds, YCC funds, or Title X amounts.

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AGR 101